

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 7587**
Yoshihiko YAMAGUCHI : Docket No. 2001-1067A
Serial No. 09/890,189 : Group Art Unit 1713
Filed July 30, 2001 : Examiner Peter D. Mulcahy
MAGNETIC RUBBER
COMPOSITION FOR ENCODER :

RESPONSE

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEE FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975.

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Responsive to the Office Action of July 3, 2003, the time for responding thereto being extended for one month in accordance with a Petition for Extension submitted herewith, Applicant submits the following remarks in support of the patentability of the present invention over the disclosure of the reference relied upon by the Examiner in rejecting the claims. Further and favorable reconsideration is respectfully requested in view of these remarks.

Thus, the rejection of claims 1-7 under 35 U.S.C. §103(a) as being unpatentable over Takiguchi et al. (US 4,421,839) is respectfully traversed.

This reference discloses a heat-sensitive recording sheet having a heat-sensitive recording layer containing a diazosulfonate, an acid coupling agent, and a thermoplastic resin.

In referring to the disclosure beginning at column 7, line 10, the Examiner takes the position that Takiguchi et al. shows a magnetic rubber composition having incorporated therein strontium ferrite, barium ferrite, silane coupling agents, lubricating agents and nitrile butadiene rubber. The Examiner acknowledges that the reference does not disclose the specific selection of a hydrogenated

nitrile butadiene rubber having the presently claimed percentage of acrylonitrile and hydrogenation ratio. Nevertheless, the Examiner maintains that it would have been obvious to select this particular hydrogenated nitrile butadiene rubber, based on the motivation that this ingredient is a known and commercially available species of nitrile rubber which is generically called for within the prior art.

Initially, Applicant notes that the Takiguchi et al. reference does not address the same problem which confronted Applicant in connection with the present invention. That is, Takiguchi et al. is directed to a heat-sensitive recording sheet for heat-sensitive recording using a thermal head, whereas the present invention is directed to magnetic rubber composition for an encoder, to be adopted in a rotation sensor for detecting the rotation speed of a wheel shaft of, for example, an automobile. [Please see the Background Art beginning on page 1 of the present application.] The problem which confronted an inventor must be considered in judging the patentability of an invention. Diversitech Corp. v. Century Steps, Inc., CAFC, 7 USPQ2d 1315. Since Takiguchi et al. was not remotely concerned with the problem which confronted the present Applicant, this factor must be considered in determining whether or not the present invention is patentable over the Takiguchi et al. reference.

Furthermore, in the present invention, it is very important to use a hydrogenated nitrile butadiene rubber as claimed in order to give sufficient magnetic characteristics for practical use of the encoder. There is no suggestion in Takiguchi et al. which would lead those of ordinary skill in the art to use such a hydrogenated nitrile butadiene rubber.

In this regard, the only disclosure in Takiguchi et al. which is pertinent to this particular feature of the present invention is the disclosure of “a rubber-type resin such as nitrile rubber” at column 7, lines 18-19 of the reference. There is no explanation about this term in the reference, nor do the working examples in the reference provide any guidance about any particular nitrile rubber. The Examiner is taking the position that the expression “nitrile rubber” in Takiguchi et al. constitutes a suggestion of the “hydrogenated nitrile butadiene rubber with 15 to 50% of acrylonitrile amount and 80 to 99% of hydrogenation ratio” as required in the present invention. The Examiner’s position is apparently based on his argument that such a “hydrogenated nitrile butadiene rubber with 15 to 50% of acrylonitrile amount and 80 to 99% of hydrogenation ratio” is a commercially available species of the “nitrile rubber” genus in Takiguchi et al., from which the art-skilled would be motivated

to select this particular hydrogenated nitrile butadiene rubber as required in the present invention. However, Applicant takes the position that the mere genus/species relationship is not sufficient to establish a presumption of obviousness. In re Benno, 226 USPQ 683. The term "nitrile rubber" in Takiguchi et al. is so tremendously broad that it could not possibly lead one of ordinary skill in art to specifically select the hydrogenated nitrile butadiene rubber with 15 to 50% of acrylonitrile amount and 80 to 99% of hydrogenation ratio required in the present invention.

In addition, as indicated above, Takiguchi et al. does not address the problems which are discussed under the Background Art beginning on page 1 of the present application. With particular regard to the problems discussed at page 2, lines 5-19 of the application, the present invention has provided a satisfactory solution to these problems as apparent from the working examples and test example described in the application beginning on page 8.


For the reasons set forth above, Applicant takes the position that the presently claimed invention is clearly patentable over the Takiguchi et al. reference.

Therefore, in view of the foregoing remarks, it is submitted that the ground of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

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